

Lymphedema Cancer's Little Known After-Shock

2nd Annual Lymphedema Awareness Day
BCIT
June 25, 2011

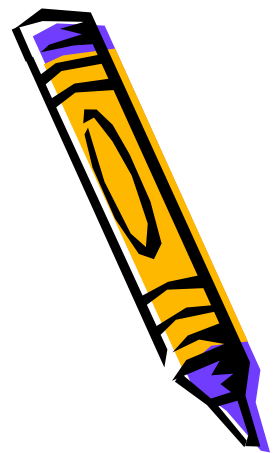


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Lymphedema

- Primary
- Secondary - obstruction/damage to the lymphatic system by disease or treatment
 - From cancer: breast, melanoma, vulva
 - From treatment of cancer: surgery, radiation
 - Post-traumatic, Post-infectious
 - Parasites: filariasis



Lymphedema

Distribution of etiology



- Malignancy or its therapy 75%
- Of all malignancy related lymphedema, 50% due to breast cancer surgery

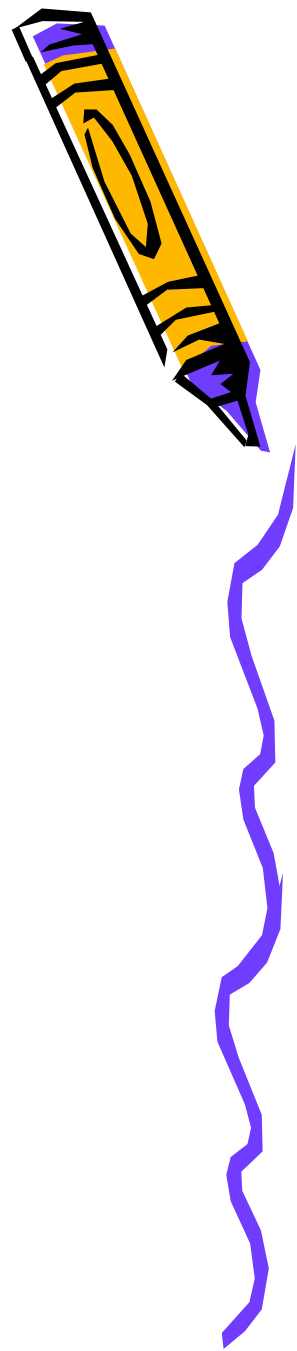


Szuba et al: The third circulation: radionuclide lymphoscintigraphy in the evaluation of lymphedema. J Nucl Med 2003; 44(1):43-57

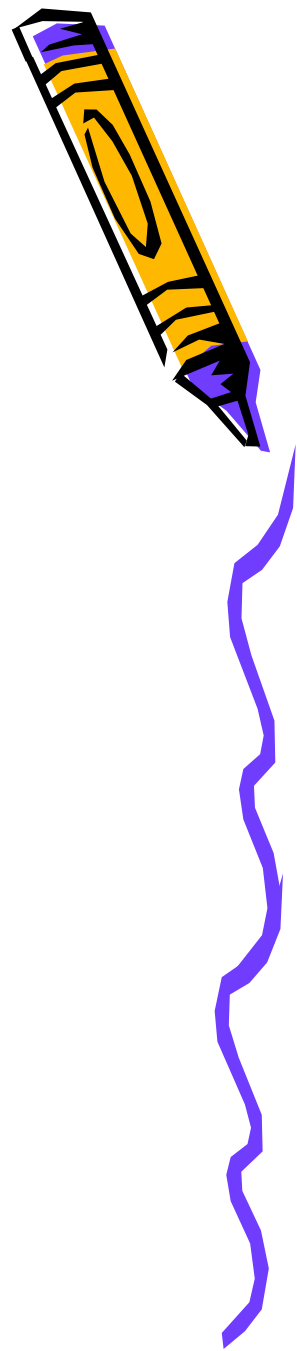


Cancers association with lymphedema

- Breast
- Melanoma
- Vulva, cervix
- Penis
- Testicular



Number of cancer cases B.C. 2007



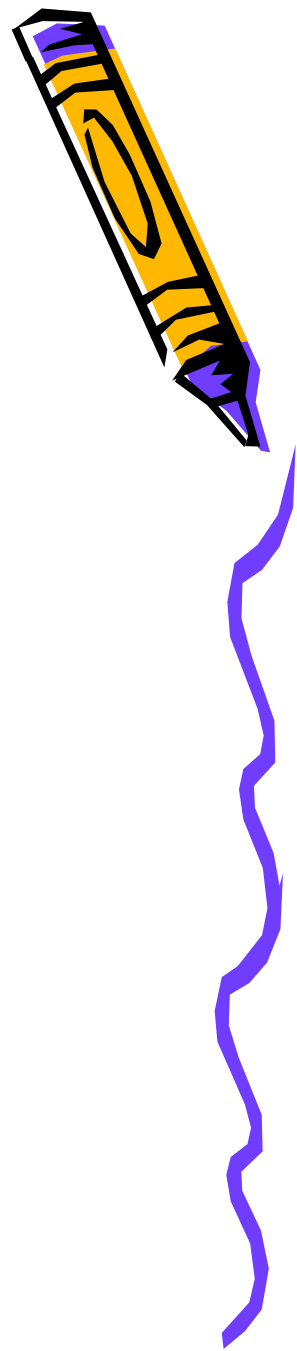
- Breast - 2852
- Melanoma - 765
- "Genital" - 89



Who develops lymphedema with cancer?

- Direct involvement by cancer
- Surgical dissection of major lymph node draining groups
- Radiotherapy of major lymph node draining groups
- Obesity
- Repeated infections

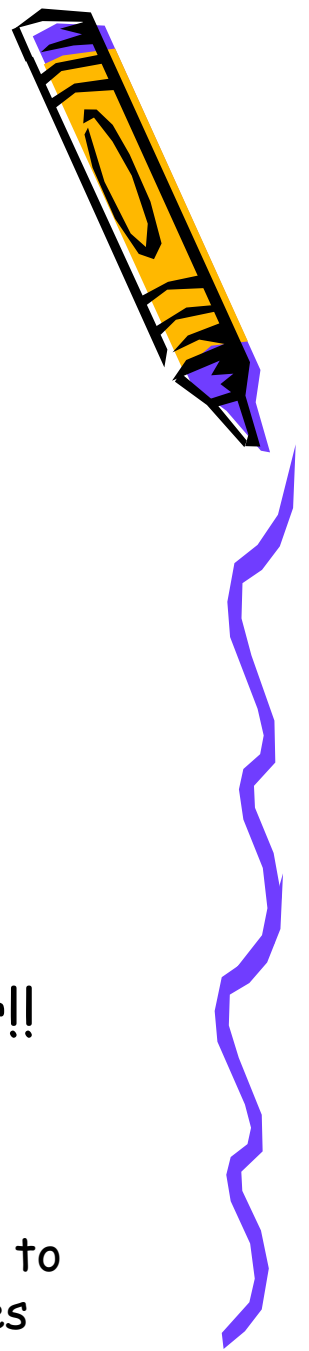




From Calgary Lymphedema Rehabilitation and Consulting Services Inc.



Diagnosis

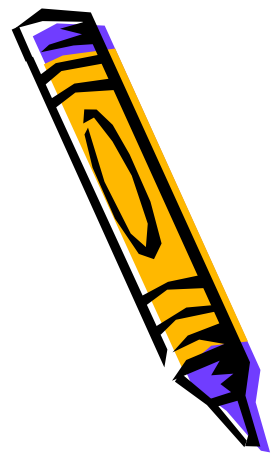


- The presence of lymphedema
 - From Symptoms to Clinical Examination
 - Limb circumference and volume*
 - ?Lymphoscintigraphy
 - ?Bioimpedance
- The etiology of lymphedema
 - Important to rule out recurrence of cancer!!



*Four point measurement: MP jt, wrist, 10cm distal to lateral epicondyles, 15cm prox to lateral epicondyles

It is really *more than* just the swelling!

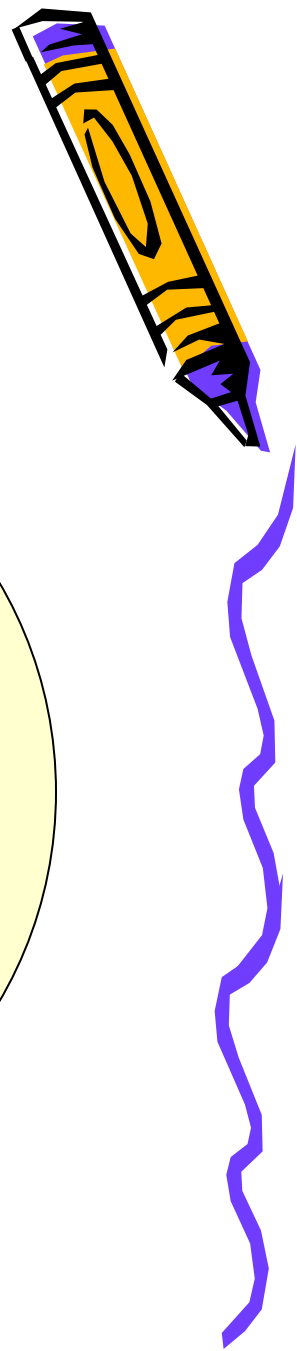
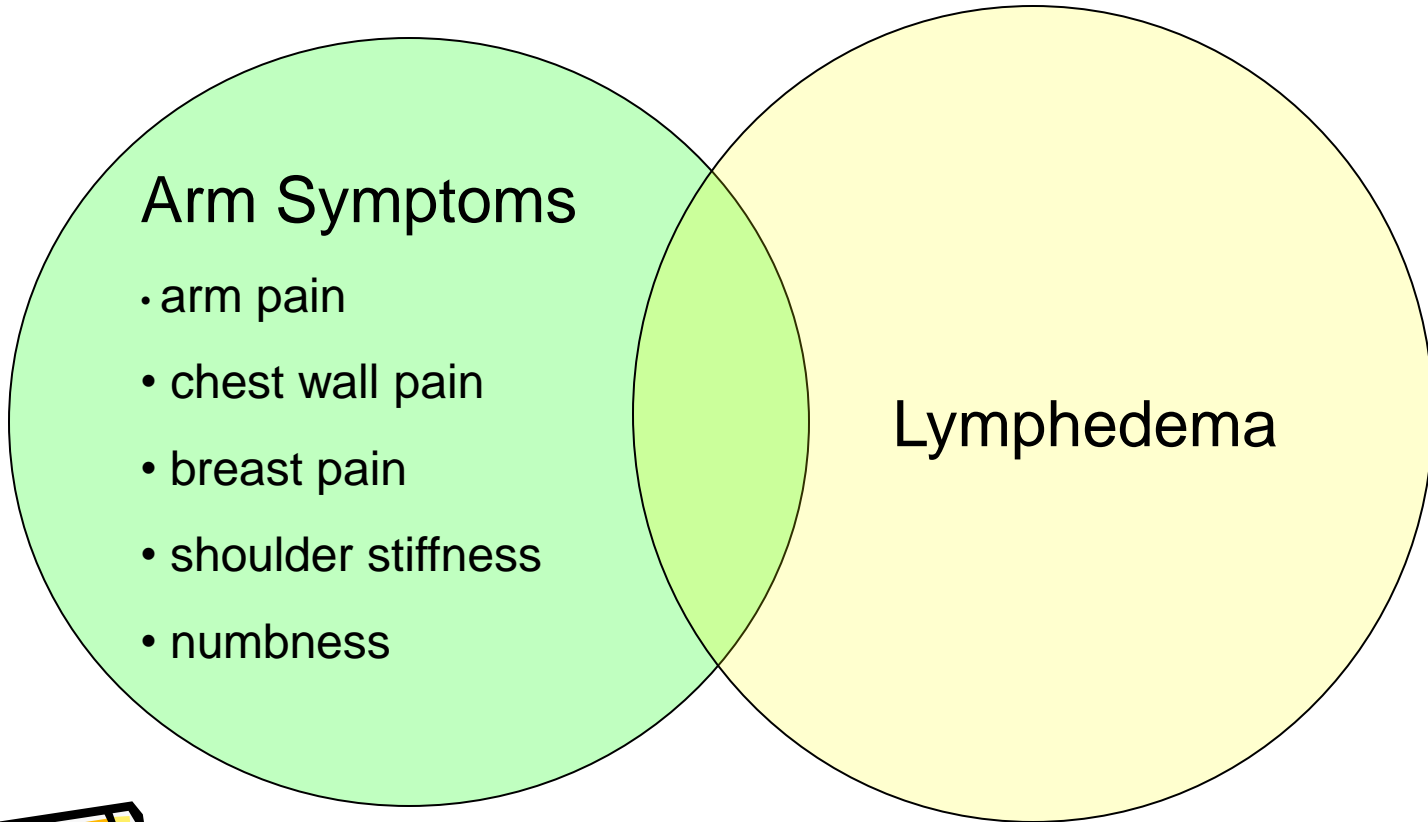


2001

- Questionnaires sent to 744 patients 2 - 7 years after breast cancer treatment
- 49.9% reported symptoms in the arm and shoulder
- 17.5% of those with symptoms had documented lymphedema, and 7% of those without symptoms had lymphedema



Chronic Arm Morbidity After Curative Breast Cancer Treatment: Prevalence and Impact on Quality of Life. Winkle Kwan et al: *J Clin Oncol* Oct 15 2002: 4242-4248



Prevalence of Lymphedema in Women With Breast Cancer 5 Years After Sentinel Lymph Node Biopsy or Axillary Dissection: Patient Perceptions and Precautionary Behaviors

Sarah A. McLaughlin, Mary J. Wright, Katherine T. Morris, Michelle R. Sampson, Julia P. Brockway, Karen E. Hurley, Elyn R. Riedel, and Kimberly J. Van Zee

- 936 women, 5 years after surgery

	Documented swelling
Reported swelling	41%
No reported swelling	5%



McLaughlin SA et al: *J Clin Oncol* 26:5220-5226, 2008



A Contemporary, Population-Based Study of Lymphedema Risk Factors in Older Women with Breast Cancer

Tina W. F. Yen, MS, MD^{1,2}, Xiaolin Fan, PhD^{2,3}, Rodney Sparapani, MS^{2,3}, Purushuttom W. Laud, PhD^{2,3}, Alonzo P. Walker, MD¹, and Ann B. Nattinger, MPH, MD^{2,4}

- Annals of Surg Oncology 2009
- Telephone surveys of 1338 patients >65 y.o. 4 years after breast cancer treatment
- Lymphedema is self reported
- Lymphedema reported in:
 - 7% after SLNB
 - 21% after ALND



Yen TWF et al: Ann Surg Oncol (2009) 16:979–988



Prevalence of Lymphedema in Women With Breast Cancer 5 Years After Sentinel Lymph Node Biopsy or Axillary Dissection: Objective Measurements

Sarah A. McLaughlin, Mary J. Wright, Katherine T. Morris, Gladys L. Giron, Michelle R. Sampson, Julia P. Brockway, Karen E. Hurley, Elyn R. Riedel, and Kimberly J. Van Zee

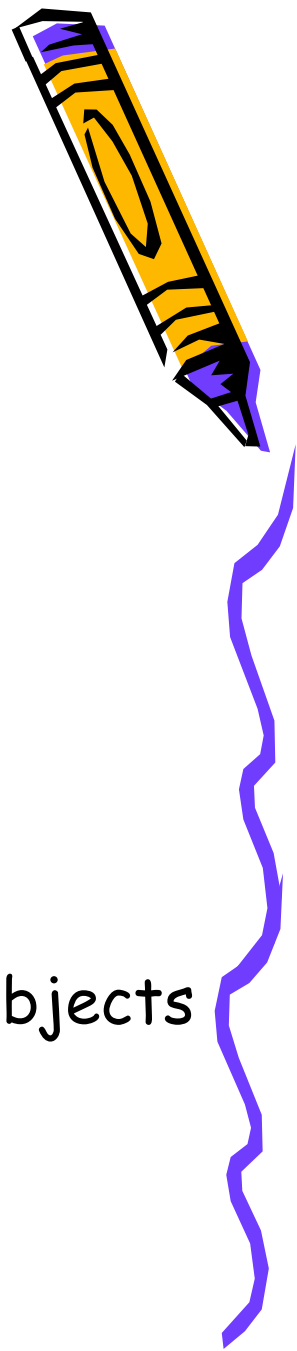
- Objective measurement of 936 women 5 years after breast cancer Rx
- Lymphedema reported in:
 - 5% of patients after SLNB
 - 16% of patients after ALND

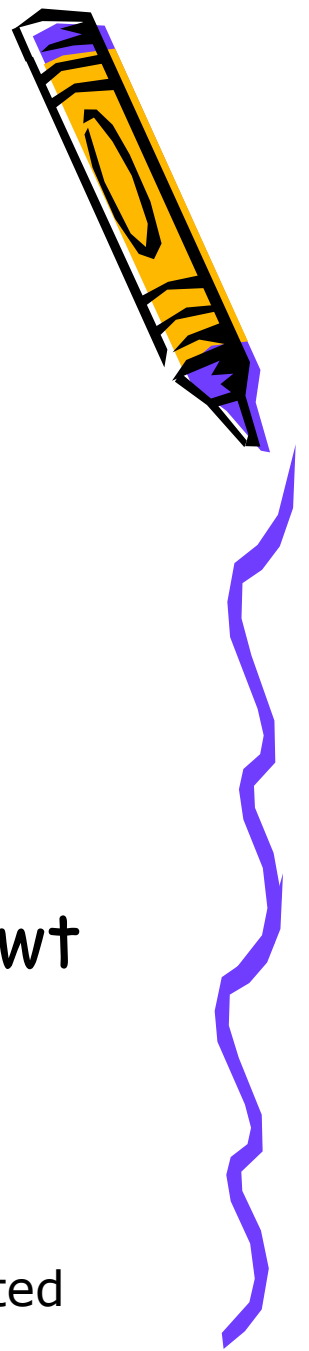
McLaughlin SA et al: *J Clin Oncol* 26:5213-5219, 2008



Triggering events

- List variable and not evidence based
- Often quoted by physicians and patients without adequate validation
- Includes:
 - Infection
 - Needle pricks
 - Trauma
 - Burns
 - Air travel
 - Exercise
 - Lifting heavy objects
 - Heat
 - Insect bites





Exercise and lymphedema

- 141 breast cancer survivors, stable lymphedema
- 2x per weekly weight lifting Vs control
- Women required to wear a well fitting compression garment
- Results: No difference in lymphedema, wt lifting associated with reduced exacerbations & improved symptoms.



Schmitz KH et al: Weight lifting in breast cancer related lymphedema. N Engl J Med 2009;361:664-73.

Practical Advice on treatment

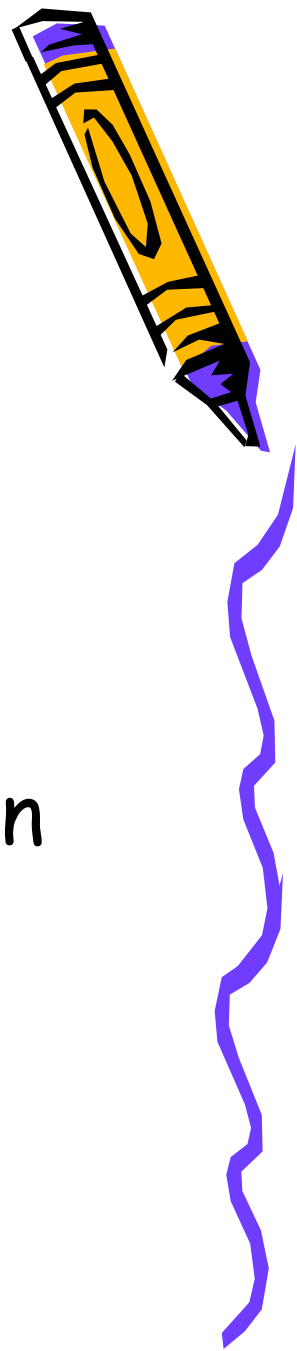


1. *Prevention, prevention, prevention*

- Maintain *ideal body weight*
- Treat cellulitis *promptly*
(consider giving home supply of antibiotics
- Pen VK or cephalexin)
- Avoid activities which can expose the arm/leg to repeated trauma and infection
- Stay active



Practical Advice on treatment



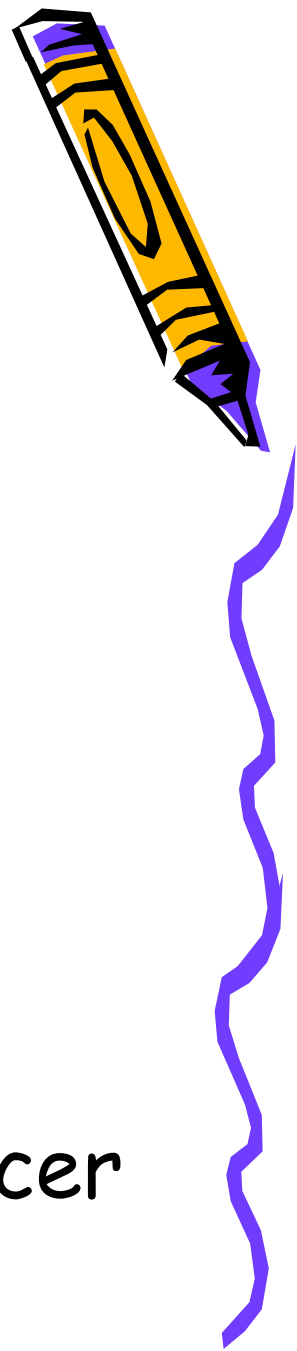
2. Intervene early

- Compression Garments
- Sequential pneumatic compression pumps

• Massage therapy - MLD or CPD



Treatment - Compression garment



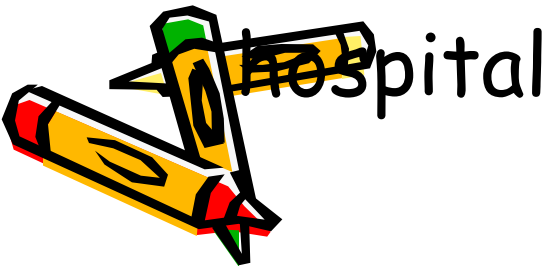
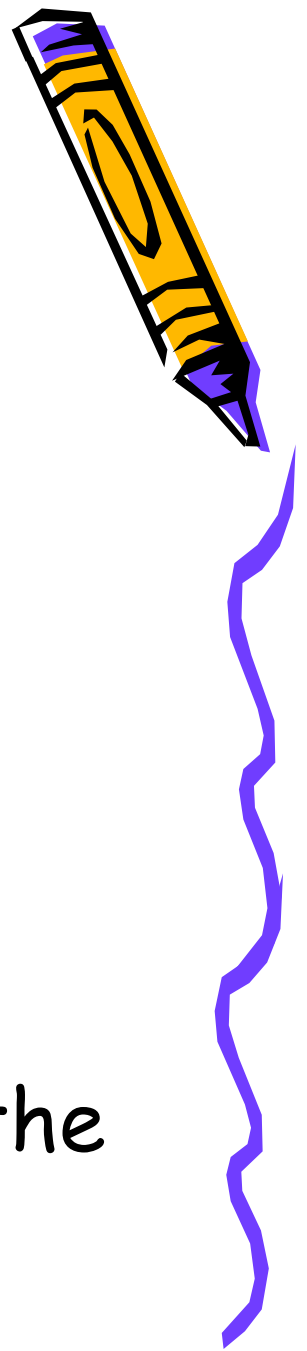
- Most established treatment
- Sleeves
 - "Over the counter" - ~\$60
 - Custom made - \$200 - \$300
- Gauntlet/Gloves
 - \$30 - \$100 without fingers
 - \$150 - \$400 with fingers

Paid for by MSP if it is breast cancer related (prescription needed)



Treatment - Pneumatic Pumps

- Method of using the pump not standardized, the "ideal" pump not standardized
- Available in hospital based physiotherapy programs
- Referral by a physician required
- Possible waiting list depending on the hospital

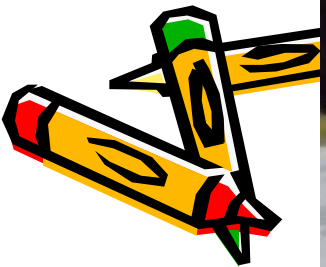
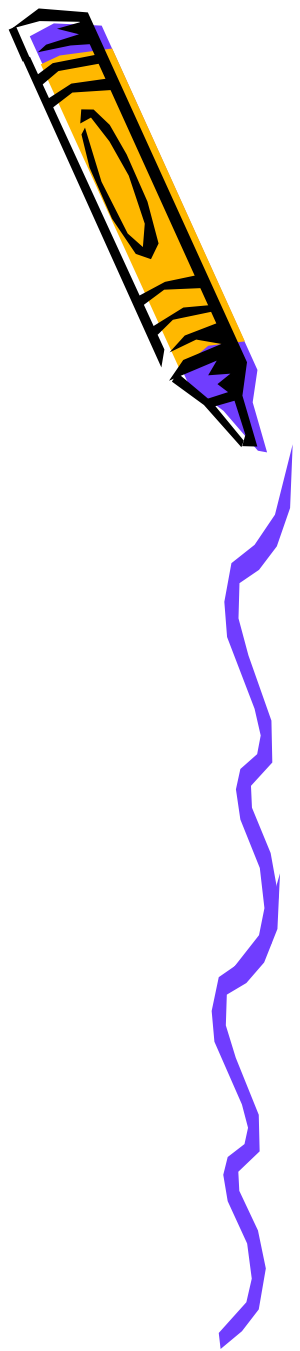


Treatment - Manual Lymphatic Drainage



- Also known as Complex Decongestive Therapy
- Administered by Massage Therapists
- Involves a course of complex massages followed by elaborate bandaging
- Cost \$60 - \$80 per hour + materials
- Several different schools with similar but non-identical theories

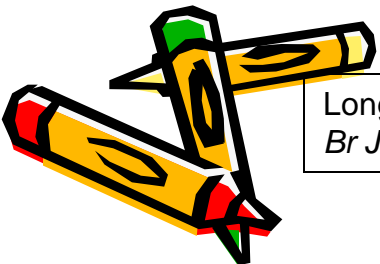




Duration and magnitude of the problems

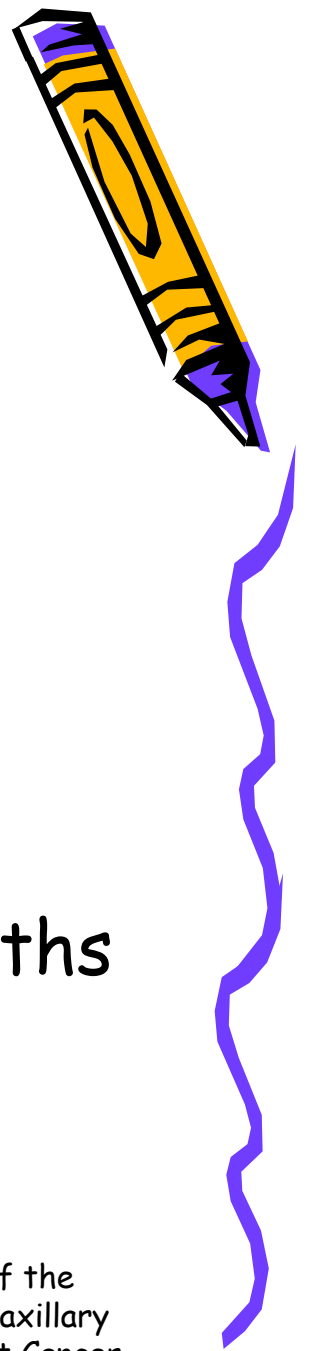


- Questionnaire followup of patients 7 - 12 years after breast cancer treatment (mean 9 years)
- Results: of women reporting post-mastectomy pain syndrome, half continued to experience the same at a mean of 9 years after surgery



Long-term follow-up of breast cancer survivors with post-mastectomy pain syndrome. L Macdonald et al: *Br J Cancer* 2005, 1-6.

New developments in Cancer Treatment



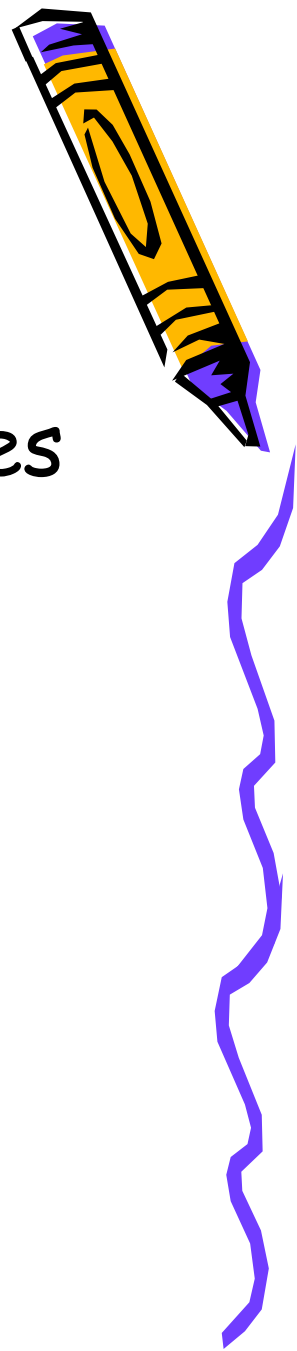
- Sentinel nodal biopsy Vs Axillary dissection in breast cancer
 - ALMANAC Study: Randomized comparisons of SNB Vs AND in early breast cancer
 - Self reported arm swelling at 18 months 7% Vs 14%



Fleissig A et al: Post-operative arm morbidity and quality of life. Results of the ALMANAC randomised trial comparing sentinel node biopsy with standard axillary treatment in the management of patients with early breast cancer. *Breast Cancer Res Treat.* 2006;95(3): 279-93

New developments in Cancer Treatment II

- Wider use of sentinel nodal biopsies in vulval cancer and melanomas



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Lymphedema secondary to
treatment is bad ...

But it is worse if one dies
from the cancer

